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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

May 24, 2000

Magalie Roman Salas
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: In the Matter of Compatibility Between Cable Systems and Consumer Electronics Equipment , PP Docket No. 00-67

Dear Ms. Salas:

Enclosed please find for filing an original and four (4) copies of the comments of Fox Entertainment Group, Inc. in the above-captioned proceeding. Per the Commission's instructions, diskette copies of the comments are being sent to Jonathan Levy and International Transcription Service ("ITS").

Please date stamp this letter and return it to the messenger as proof of service. Should you have any questions regarding the enclosed, please contact the undersigned.

Respectfully submitted,

Susan E. McDonald

Susan E. McDonald

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Jonathan Levy
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OFFICE OF THE SECRETARY

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
Compatibility Between Cable Systems And Consumer Electronics Equipment	)	**PP Docket No. 00-67**

COMMENTS OF FOX ENTERTAINMENT GROUP, INC.

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Dated: May 24, 2000

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Before the
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Washington, DC 20554

In the Matter of	)	
Compatibility Between Cable Systems And Consumer Electronics Equipment	)	**PP Docket No. 00-67**

COMMENTS OF FOX ENTERTAINMENT GROUP, INC.

Fox Entertainment Group, Inc. ("Fox"),[1/] by its attorneys, hereby submits its comments in response to the Notice of Proposed Rulemaking ("Notice") in the above-captioned proceeding.[2/]

INTRODUCTION AND SUMMARY

The Commission seeks comment on licensing terms for copyright protection technology in connection with ensuring the "compatibility of cable television systems, digital television receivers, set-top boxes, and other equipment."[3/] Digital technology holds the promise of ushering in a whole new era of audiovisual content and entertainment, offering consumers,

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1/ Fox Entertainment Group, Inc., 83% owned by The News Corporation Limited ("News Corp"), is principally engaged in the development, production and worldwide distribution of feature films and television programs, television broadcasting and cable network programming. Its studios, production facilities and film and television library provide high-quality creative content, and its broadcasting and cable networks provide extensive distribution platforms for its programs. Through Fox Broadcasting Company, it operates the Fox Television Network. Fox Television Stations, Inc. own and operate twenty-three broadcast television licensees throughout the country. News Corp's operations also include the publication of newspapers, magazines, books; the production and distribution of promotional and advertising products and services; the development of digital broadcasting; the development of conditional access and subscriber management systems; and the provision of computer information services. Along with several other television networks, Fox Broadcasting Company is also filing a letter with the Commission in this proceeding.

2/ Compatibility Between Cable Systems and Consumer Electronics Equipment, Notice of Proposed Rulemaking, PP Docket No. 00-67, FCC No. 00-137, rel. April 14, 2000 ("Notice").

3/ Id. at ¶ 1.

hardware manufacturers, and content creators and distributors a dizzying array of new products and possibilities. There is little dispute that widespread deployment of digital television hardware will be spurred by the availability of compelling audio-visual programming content in digital formats. While digital television technology will bring great changes, the fundamental framework to encourage the creation and distribution of compelling content remains the same: creators and owners of copyrighted works must be allowed to exercise their exclusive right to determine the form, manner, and scope of disseminating their work to the public.

The digital era will demand a new level of vigilance on the part of both industry and government to ensure copyright protection. The dazzle of new digital technologies must not be allowed to obscure new risks and threats to this country's two centuries of commitment to copyright protection. The digitization of information and the rapid development of the Internet has dramatically increased the ease with which audiovisual works can be copied, manipulated, and disseminated to the public. With the click of a mouse, nearly perfect copies, including copies of over-the-air broadcast television programs, can be distributed worldwide almost instantaneously. These copies can be stored indefinitely and replicated many times over without degrading the quality of the work. Thus, the means to engage in minor or large-scale acts of copyright infringement exist in many U.S. households, and this circumstance will only expand as more and more homes obtain broadband connections for both Internet and internal home network connections and transmissions.[4/]

Notwithstanding the risks to copyright security associated with the advent of digital technology, Fox firmly believes that there need not be any trade-off or false choice between

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[4/] See Working Group on Intellectual Property Rights, Intellectual Property and the National Information Infrastructure ("IPNII Working Group Report"), at p. 12; Information Technology Association of America, Intellectual Property Protection in Cyberspace: Toward a New

robust copyright protection and rapid deployment of digital hardware. A number of consumer electronics manufacturers and information technology providers have acknowledged the need to design and implement systems to protect copyrighted content in the digital environment.[5/] The Commission has recognized and encouraged such work towards "comprehensive market-driven solutions" as "superior to [any] regulatory approach" in this regard.[6/]

The same advances in digital technology that promise a new generation of consumer electronics hardware also can be used to foster innovative new forms of copyright protection. Technology need not advance at the expense of copyright protection. Fox has been working to develop copyright-compliant digital technologies with Victor Company of Japan, Ltd. ("JVC").[7/] By safeguarding content, these technologies provide an avenue for consumers to reap the benefits of the digital revolution. Likewise, Fox has been working with the developers of Digital Transmission Content Protection ("DTCP") technology -- the so-called "5C" group.[8/] Other industry efforts, such as Intel's High-Bandwidth Digital Content Provision ("HDCP"), JVC's Related Device Authentication ("RDA"), and other initiatives aimed at standardizing content

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Consensus, October 1999 ("ITAA Report"); Randall Davis, The Digital Dilemma: Intellectual Property in the Information Age, Public Briefing, Nov. 3, 1999.

5/ For example, disk drive manufacturer Quantum Corp. and Matsushita Electric have developed technology called the 1394 Quantum QuickView, which will provide for digital copyright protection. See Glen Dickson, "FireWired up for PVRs; New Technology Will Provide Digital Copy Protection," Broadcasting and Cable, May 1, 2000. See also Bill Pearson, "Digital Transmission Content Protection," June 16, 1999, at p.10, available at the official 5C website, <<http://www.dtcp.com>> (indicating that content protection "is only as strong as the weakest link" in the chain).

6/ Notice at ¶ 3.

7/ See "JVC Announces Copy Protection System for Digital VHS," Asia Pulse, April 18, 2000 ("JVC Announces") (noting that Fox endorses the copyright protection system for its own HD content, and that JVC is approaching other content providers for their endorsement.).

8/ See infra.

labelling and watermarking technologies, are also underway. Although these efforts have yielded substantial progress on several issues, a number of key matters have yet to be resolved.

Because the digital environment will foster new forms of copyright infringement and theft, those in industry and government who are committed to copyright protection must be open to new forms of protection. Content creators must be permitted to take appropriate steps, such as encryption algorithms and copy control measures embedded in signal transmissions, to safeguard their right to determine the scale, scope and timing of dissemination of their work to the public. Even creators and distributors of free over-the-air broadcast television programming must be permitted to take necessary steps to protect their content from unauthorized and instantaneous global distribution via computers connected to the broadband Internet that can receive and retransmit video programming signals. Moreover, copyrighted programming must be protected as its passes through the set-top box and other "source devices" in a digital form, where it is particularly susceptible to piracy.[9/] In addition, any regime of copyright protection in the digital age must be robust, to protect against the very real threat of hacking.

While each of these issues has been discussed in the context of private sector negotiations, they have not yet been resolved in a manner that assures the requisite level of copyright protection in the digital age. Still, intervention by the Commission at this time would not be fruitful or in the public interest -- even if the Commission had jurisdiction to take such action. Market-driven copyright protection solutions will create the best climate for the timely introduction of digital services, like digital television and commercially available cable set-top boxes. In fact, at this stage, Commission intervention could have inadvertent negative consequences -- from disrupting the dynamic of long-standing negotiations that have generated

substantial progress to freezing in place standards and "solutions" whose efficacy proves to be inadequate and ephemeral -- and for that reason should be avoided. Instead, the Commission should continue to encourage workable, market-driven solutions within the framework of ongoing negotiations.

I. COMPREHENSIVE AND SECURE CONTENT PROTECTION IS ESSENTIAL TO THE PUBLIC INTEREST

Digital technology's vast potential can only be unleashed fully if content protection can be assured in the future. While the Commission has initiated this proceeding to resolve issues related to cable television systems and digital television receivers, the copyright protection issues mentioned in the Notice have broader consequences. Comprehensive and secure copyright protection in the digital environment is essential to the public interest. Protecting content ensures its continued availability to all consumers, and preserves incentives to continue developing and producing new content in the future.

Just as the digital environment offers new opportunities, it also presents heightened challenges. Although digital technology itself does not change the law, it can affect behavior by making it cheaper, faster, and easier to steal content. In the absence of a legitimate market for their programs, content creators will be limited to ever more exclusive release windows to ensure their investments are recouped, which in turn will drastically cut down audience size. Absent compelling content, advertisers will drop their support of broadcast television, which will no longer be sustainable as a business. The bottom line is this: if content that utilizes and takes full advantage of new digital technology is to reach the mass audience, copyright protection must be assured.

[9/] The Commission rightly expresses concern regarding the "interface between digital television receivers and set-top boxes." See Notice at ¶ 11. Content passing across an insecure interface is jeopardized and susceptible to unlawful copying and distribution.

A. Consumers Stand to Benefit from a Digital Environment in Which Copyright Protection for Content is Assured

The framers of the Constitution recognized the public benefits inherent in promoting "science and the useful arts" by protecting copyright.[10/] Protecting incentives to produce creative content has been a pillar of economic and public policy since the beginning of the Republic.[11/] Thus, while digital technology may present new opportunities and new challenges, there is no dispute about the importance of protecting the rights of content creators.

There need be no trade-off between ensuring copyright protection in the digital age and promoting rapid deployment of new digital hardware. In fact, there is a clear interdependence of interest among content providers and hardware manufacturers. The availability of pay-per-view movies, premium channels, cable programming networks and over-the-air broadcast stations in digital form will drive consumer purchase and acceptance of digital customer equipment. In turn, content providers and distributors will have an opportunity to provide viewers with new levels of content quality and new forms of content. Digital television can provide viewers with access to theater-quality sound and picture resolution on pay-per-view and premium movie channels, concert-quality musical performance on cable channels, and new levels of intensity and excitement in live-action sports shown on broadcast channels. Digital television also will foster new forms of audiovisual programming content, that will offer viewers the type of customization and interactive capabilities that only now are available on the Internet.

Today, the release of filmed entertainment and televised content in stages (so-called "windowing") allows content owners and licensees to recover their investment in creative works

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[10/] U.S. Const. art. 1, Sec. 8, cl. 8.

[11/] See Harper & Row, Publishers, Inc. v. Nation Enterprises, 471 U.S. 539, 558 (1985) ("[I]t should not be forgotten that the Framers intended copyright itself to be the engine of free expression. By establishing a marketable right to the use of one's expression, copyright supplies the economic incentive to create and disseminate ideas."). See also Davis, supra n.4.

over time, while permitting consumers to tailor their personal consumption -- albeit not very precisely. Today's choices for televised programming, for example, include broadcast and cable channels, prime-time programming, first-run and back-end syndication programs, premium channels, pay-per-view and perhaps video-on-demand. In the future, digital technology will enable consumers to more precisely calibrate the circumstances under which they will view and personalize their content -- and their costs of doing so. Broadcast television may remain a premier outlet for new content, and the entertainment, sports, and cultural offerings available today -- as long as content is protected. If digital technology is allowed to undermine the value of programming, consumers will not benefit from it; in the end, they will pay more for it by subsidizing the costs of theft.

B. Copyright Protection Efforts Must Respond to New Forms of Cyber-Theft and Unauthorized Distribution Emerging in the Digital Environment

In addition to these opportunities, the digital environment presents several important challenges for securing intellectual property.[12/] Today, even before the transition to a digital home environment has really begun, theft of copyrighted content poses a major problem.[13/] On a combined annual basis, theft of motion pictures, recorded music and cable service is estimated to be approximately $10 billion.[14/] But the onset of digital technology could foster a whole new

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[12/] See H.R. Rep. No. 105-551 (1998) ("[T]he Committee also recognizes that the digital environment poses a unique threat to the rights of copyright owners, and as such, necessitates protection against devices that undermine copyright interests.").

[13/] See infra. According to a recent study, in 1998, the software industry in the United States lost over $11 billion to piracy. See "BSA Applauds Federal Crackdown on Internet Piracy," <<http://www.bsa.org/pressbox/enforcement/957881069.html>>. The Recording Industry Association of America ("RIAA") estimates that one million dollars is lost each day in the United States to non-Internet piracy. See <<http://www.riaa.org/Protect_Campaign-3.cfm>>.

[14/] Piracy costs motion picture companies an estimated $250 million annually in lost revenues in the United States. See <<http://www.mpaa.org/anti-piracy/content.htm>>. The recording industry loses approximately $4.5 billion to music piracy each year. See <<http:// www.riaa.org

wave of content theft. As the Commission observes, digital technology allows "high quality copies [to] be made and further reproduced with virtually no degradation in quality."[15/] While making a perfect copy of an analog work (such as a book, movie, or television show) can be expensive and time-consuming, digital technology eradicates most -- if not all -- of the practical impediments to copyright infringement by drastically reducing the time and cost of making "perfect" copies.[16/] Moreover, the average consumer now has easy access to equipment capable of producing unauthorized reproductions on a large scale.

Digital technology also enhances the problem of decentralized infringement. New electronic equipment makes it possible for consumers to create copies, and the Internet facilitates their distribution. New compression algorithms further enable individuals to distribute large files to widespread audiences.[17/] The deployment of broadband Internet facilities has even more dramatically increased transmission speeds.[18/] On top of this, new Internet offerings push the envelope by enhancing the ability to distribute unauthorized copies online.[19/] Moreover, the

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/Protect_Campaign-3.cfm>>. Cable theft is estimated to have cost the industry five billion dollars in 1995. NCTA Office of Cable Signal Thefts, 1995 Annual Report.

[15/] Notice at ¶ 11.

[16/] See Executive Summary, "The Digital Dilemma, Intellectual Property in the Information Age," <<http://books.nap.edu/html/digital_dilemma/exec_summ.html>> (observing how reproduction costs are much lower in the digital environment).

[17/] See Louise Kehoe, "Music Industry Can't Cope with Internet: Bent on Preserving Traditional Business Model," National Post, May 17, 2000. MPEG 4, the newest generation of data compression technology, can shrink digital files to 1/450 of their original size.

[18/] See "The Digital Reckoning," Time, May 22, 2000, p.56. Faster Internet connections will result in the ability to download songs as easily as playing them from a CD or the radio, due to the "always-on, higher-bandwidth environment." See id.

[19/] Client-to-client-based programs, such as Napster, Gnutella, and Imesh make swapping music files online "quick and painless." See id. See "Spinning Out of Control," The Deseret News, May 12, 2000, p.A13 ("Napster, a free software . . . [is] available at a centralized Internet site, where users can easily obtain CD-quality copies of thousands of copyrighted songs"); Joe Salkowski, "Music Fans as Criminals Sounds Bad," Chicago Tribune, May 8, 2000, p.8

onset of broadband wireless transmission technologies and new wireless consumer devices predicated on "Bluetooth"-type applications will inevitably expand the potential scope of distribution of stolen digital content.[20/] In the absence of adequate copyright protection, this "digital cocktail" could prove fatal to content providers and to consumers who are looking forward to the promise of digital technology.

Without adequate protection, content owners could effectively be limited to exploiting a single broadcast of any program. Viewers in the first "market" receiving such programming could transmit it over the Internet and/or make endless numbers of copies effortlessly -- all without loss of quality. Under these circumstances, it would be difficult, if not impossible, for broadcasters to earn back their license fees in advertising and for content owners to recoup their investments, as many of the markets from which they would otherwise earn secondary license fees (such as in syndication) might be unwilling to spend money for product that already has been widely disseminated on the Internet and elsewhere.

The recent experiences of the recording industry demonstrate vividly the confluence of these issues. Centralized services such as MP3.com[21/] began to offer "online libraries" of compact disc-quality recorded music to users. The recording industry raised concerns that hundreds or thousands of copyrighted music files were being readily reproduced without

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("Because [Napster's] software makes it easy to track down MP3 files made by other users, the entire Internet could conceivably listen to the latest Metallica release if just one Napster user pays for the CD and copies it onto his hard drive."). The creator of FreeNet, a yet-to-be-released online music swapping service, claims his program will "make it impossible to control the traffic in any kind of digital information -- whether it is music, video, text or software." See "Cyberspace Programmers Confront Copyright Laws," The New York Times, May 10, 2000, p.A1.

[20/] Bluetooth is a proposed Radio Frequency specification that will enable fast, ad hoc, cable-less Internet connections and data exchange. See IrDA versus Bluetooth: a Complementary Comparison, available at <<http://www.countersys.com/tech/bluetooth.html>>.

authorization on the Internet with simple software, which is available for free on the Web.[22/] New technologies are now moving away from centralized services to encourage consumers to conduct "online swap meets." The "Napster" service, for example, allows users log onto central servers and make their files available to other logged-on users.[23/] Napster's database allows individuals to locate each other and exchange files. Users can then download and play musical works in MP3 format. There is widespread concern that many of the recordings made available by Napster are stolen, thus infringing the rights of the copyright holders.[24/] In fact, one band recently identified more than 300,000 individuals pirating their works through the service.[25/]

Even more software applications are being developed along these lines. Touted as a "more sophisticated version of Napster," Gnutella is a "distributed network program" that allows

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[21/] "MP3" technology enables the compression and storage of images and sound for the recording and playback of digital sound files.

[22/] On January 21, 2000, RIAA members filed a lawsuit against MP3.com, claiming the company violated copyright laws by allowing users to download copyright-protected songs from its Web site onto their hard drives. On April 28, 2000, a District Court in New York granted partial summary judgment in favor of the RIAA, ruling that MP3.com was liable for copyright infringement. See UMG Recordings, Inc., et al. v. MP3.com, Inc., 2000 WL 524808 (S.D.N.Y. May 4, 2000).

[23/] In addition to making available their own music libraries, users are able to access and download files from other users. See "Rapper Dr. Dre Lists Napster Users He Says Infringed Copyrights," WALL ST. J., May 18, 2000, at 2000 WL-WSJ 3029879.

[24/] On December 7, 1999, the RIAA filed a lawsuit against Napster, charging the company with contributory and vicarious copyright infringement. See "Studios Sue MP3 Startup Napster," Dec. 9, 1999, <<http://www.cnn.com/1999/TECH/computing/12/09/napster.suit.idg/index.html>>. The District Court rejected Napster's defense that it only acts as a "conduit" for information, and the lawsuit will now go to trial. See A&M Records, Inc., et al. v.Napster, Inc., No. C99-05183 MHP (May 5, 2000). The Progressive Policy Institute recently issued a discussion paper advocating for the need to revisit the DMCA in light of the development of these sorts of search applications. See Shane Ham and Robert D. Atkinson, "Napster and Online Piracy," Progressive Policy Institute Policy Report, May 2000, <<http://dlcppi.org/texts/tech/napster1.htm>>.

[25/] Michael Learmonth and Hane C. Lee, "Metallica on MP3-Swap Services: Kill 'Em All," The Industry Standard, May 4, 2000, <<http://www.law.com/cgi-bin/nwlink.cgi?ACG=

a computer to search the files residing on other computers running the program and retrieve information made available by other users.[26/] While Napster allows trading of MP3 files only,[27/] Gnutella is not so limited. Moreover, Gnutella does not host a database of "logged-on" users to facilitate the exchange of files; instead, each computer in the "network" acts as an independent search engine for any incoming request. Since Gnutella avoids communication with servers used by major Internet service providers and portals, detecting and deterring the source of digital theft becomes a near-impossible task and unauthorized copies can be made without interference.[28/]

Audiovisual content has not been spared from the spate of Internet-related content theft. Practically every movie that Fox has released in the last three years has found its way in unauthorized form to the Internet. Even new blockbusters, such as Star Wars Episode I: the Phantom Menace, were available on the Internet within days of their theatrical release.[29/] In November 1999, hackers in Europe cracked the encryption code on digital video discs ("DVDs")

ZZZOCGNMT7C>> (noting that the band identified the names of 335,435 users alleged to have swapped Metallica recordings on the Internet).

[26/] See "E-Power to the People; New Software Bypasses Internet Service Providers," The Washington Post, Sec. A, May 18, 2000.

[27/] See John Borland, "Napster hack allows free distribution of software, movies," March 22, 2000, <<http://news.cnet.com/news/0-1005-200-1581232.html>> (discussing "Wrapster," which allows any file type to be listed and traded over the Napster network, which was designed to recognize only MP3 files).

[28/] New versions of such programs are being introduced with increasing frequency. See Mark Lewis, "Programmer Creates Java Gnutella In Defense of Liberty," Webnoize, May 23, 2000, <<http://news.webnoize.com/item.rs?ID=9127>> (called FURI and freely distributed over the 'Net, the program is a new version of Gnutella that turns any computer into both a client and server so that users can search and download files from each others' hard drives).

[29/] South Park The Movie hit cyberspace the same day it was released. Other major productions such as Eyes Wide Shut, American Pie, and The Blair Witch Project were available on the Internet before their first theater run was over. See Vince Horiuchi, Stolen Movies: PC Pirates Beating Hollywood to the Punch Via Internet, The Salt Lake Tribune, July 29, 1999, A1. See also Testimony of Jack Valenti, President and C.E.O. of the Motion Picture Association of America before the Subcommittee on Telecommunications, Trade, and Consumer Protection of the Committee on Commerce, Hearing of October 28, 1999 (Ser. No. 106-83), at pp.11-12.

and distributed the decryption program on the Internet. The security breach allows users to copy DVDs using a computer's DVD-ROM drive. The motion picture industry is currently working to contain the damage caused by computer "hackers" who cracked the encryption software that protects DVDs.[30/] Although the courts have so far sided with content owners, the de-scrambling algorithm was rapidly posted to the Internet and is now available to the public.[31/] Unfortunately, there is no way to update existing DVDs or DVD players in both hardware and software so as to prevent online thieves from continuing to work around the encryption.

Notwithstanding these high-profile breaches, bandwidth constraints presently deter widespread cyber-theft of audiovisual content. The proliferation of broadband network technologies could nullify such practical constraints on the unauthorized reproduction and dissemination of audiovisual content. With high-speed connections, films can be downloaded in a fraction of the time that it would otherwise take. Meanwhile, the film industry is moving to digital technology in all distribution windows, which will heighten the need for guarding against unauthorized digital copies.

[30/] The copyright protection system for DVD hardware devices, known as the Content Scrambling System ("CSS"), was broken by a group of hackers, including a 16-year-old Norwegian student who subsequently posted in to the Internet. CSS assigns a unique key to each DVD player or DVD-ROM drive. Matching keys are encoded onto DVD disks that enable DVD players to decrypt and play the scrambled content. The "DeCSS" decryption program breaks that key and allows for the recording of un-encrypted content in digital form.

[31/] A federal court in New York recently granted a request filed by the seven largest U.S. movie studios to enjoin individuals from distributing the DeCSS program over the Internet. See Universal City Studios, Inc., et al. v. Reimerdes, 2000 WL 48514 (S.D.N.Y. Jan. 20 2000). A California court in Santa Clara County granted a similar request filed by the Copy Control Association, which licenses the DVD encryption technology. See DVD Copy Control Assoc., Inc. v. McLaughlin, et al., 2000 WL 48512 (Cal. Super. Jan. 21, 2000). The California complaint was based on theft of trade secrets, as opposed to federal copyright, claims.

C. Current Private Sector Negotiations and Initiatives Among Content Providers and Consumer Electronics Manufacturers and Information Technology Providers Underscore the Importance of Digital Content Protection

Fox and other content providers are not alone in arguing that copyright protection must be a bulwark of the digital future. Consumer electronics manufacturers ("CEs") and information technology companies ("ITs") echo these sentiments, and are working to protect copyright as a matter of self-interest to assure the availability of high-quality programming for the next generation of digital devices. The 5C companies are working as well to develop a framework for the home "network" that protects the rights of copyright owners. In fact, there is clear recognition from the companies developing DTCP that the success of a "new generation of products and services" -- from televisions and video recording formats to set top boxes and new digital applications -- is dependent upon protecting copyrighted content.[32/] As they acknowledge, digital content protection technologies must guard copyrighted works from theft so as not to "destroy the economic foundation of the content creation industries."[33/]

Because that result manifestly is not in the self-interest of technology providers, manufacturers are working to develop technology to protect content. Some of these efforts have already paid off. For example, JVC has developed a new copyright protection system for pre-recorded digital VHS ("D-VHS") content as well as in-home analog and digital recording. This system will enable the development and production of pre-recorded high definition video content and add momentum to the development of D-VHS hardware products.[34/] In fact, D-VHS digital

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[32/] "The Promise of Digital Television," available at <<http://dtcp.com>>.

[33/] Id. (emphasis supplied).

[34/] See JVC Announces, supra n.7. This technology offers compatibility with all types of television broadcast standards, and accommodates both digital and analog systems and offers compatibility with conventional prerecorded analog VHS content.

recorders for home use will soon be available from JVC.[35/] In addition to developing D-VHS recorders that are compliant with this new technology, JVC will be working with the hardware industry to promote the adoption of the new system into more consumer and professional D-VHS units.[36/]

Other initiatives are also under way, such as Intel's HDCP and JVC's RDA. HDCP is intended to protect un-compressed digital content for use in high-definition displays. RDA is intended to provide an additional protection layer to high-definition and standard-definition digital video content.[37/] All these efforts illustrate the substantial investments of time and money being made to ensure that content remains protected in the digital environment. They also show that the market is working to develop a number of alternatives for consumers and content providers, and that there is no need for a "one size fits all" approach. Progress can be made on various fronts as content producers and technology manufacturers work cooperatively to develop and refine the best possible protection measures.

II. THE CONTENT COMMUNITY, CONSUMER ELECTRONICS MANUFACTURERS, AND INFORMATION TECHNOLOGY PROVIDERS ARE WORKING TOWARD AN INDUSTRY-DRIVEN SOLUTION TO THE NEW CHALLENGES TO CONTENT PROTECTION POSED BY THE DIGITAL AGE

The new opportunities for audiovisual content presented by digital technology can be fully exploited only if the new challenges to copyright protection presented by that technology can be effectively addressed and resolved. In the DMCA, Congress took the significant step of ensuring legal protection and legal remedies for circumvention of technological measures

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35/ Id.

36/ Fox has endorsed this copyright protection system for its own high-definition content, and JVC is approaching others for their endorsement as well. According Fox Filmed Entertainment Chairman and C.E.O., Bill Mechanic, "by offering content providers like Fox and the other studios virtually perfect copy protection, [this development] should encourage more availability of HD content for home recording." Id.

designed to protect copyrighted content, while leaving the development and implementation of mechanisms to safeguard digital content to further industry negotiations.[38/] Through negotiations involving content producers and technology manufacturers, the market is working towards several copy protection solutions that will provide adequate safeguards for content in a digital environment.

A. Robust Copyright Protection Must Be Assured for All Audiovisual Programming Content Transmitted to Any Digital Device

Copyright law provides content owners and creators the fundamental right to determine the manner and scope by which their creative works are disseminated to the public. Given the ease with each digital content can be reproduced with no material degradation and transmitted on a global scale, there is broad consensus that, in the digital age, ensuring content protection can and should include copy control capabilities. Legislative endorsement of copy control capabilities is reflected in the Audio Home Recording Act, the analog recorder provisions of the DMCA, and the DMCA's grant of legal protection to copy control capabilities employed by content providers.[39/] Likewise, and as noted above, private sector initiatives aimed at addressing digital copyright protection, such as the 5C discussions, are predicated upon the recognition and use of copy control information ("CCI") and copy management systems by content providers.

The right of content creators and distributors to take appropriate steps, such as the use of encryption and copy control measures in signal transmissions, to protect their copyright interests must be afforded to all forms of audiovisual programming content, including free over-the-air broadcast television programming. The creators and distributors of broadcast television programming must be protected from the unrestricted copying and retransmission of their

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[37/] See id. (describing RDA and HDCP).

[38/] See 17 U.S.C. § 1201.

content outside the home. Digital programming broadcast over-the-air is no less susceptible to the risks and threats posed by unauthorized reproduction and retransmission of content than any other form of digital content. Internet sites have been offering unauthorized archives of popular television series for some time, and they now provide the ability to record televised programming.[40/] Earlier this year, the motion picture and broadcasting industries fought and won a major legal battle to keep broadcast television content from being retransmitted worldwide over the Internet without permission.[41/]

Broadcast television program suppliers depend upon a revenue stream that allows them to recover their investment over time. The risks inherent in creating, producing, and developing first-run programming are already daunting, and many programs are never commercially successful. Without the availability of national and international markets for syndicated video programming, the ability to recover the costs of creating first-run programs would be even more problematic. If televised programming can be instantly re-transmitted anywhere around the world via the Internet -- at virtually no cost and without any substantial impediments -- the broadcast television model will eventually collapse. There will no longer be a sustainable aftermarket for televised programming if, during a program's initial telecast, it is vulnerable to becoming instantly and universally available to anyone with an Internet connection. Likewise,

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[39/] Pub. L. No. 102-563 (1992); 17 U.S.C. § 1201(k).

[40/] John Borland, "Web VCR site revives Net TV debates," CNET News.com, May 16, 2000, <<http://news.cnet.com/news/0-1004-200-1884230.html?tag=st>>. See also Daisy Whitney, "Hmm, What's on Email Tonight?" Electric Media, May 8, 2000, p.44 (describing "Jovio," a software provider offering web-based personal TV programming).

[41/] In two related cases, a Canadian website company and its principals were sued for intercepting television signals and re-broadcasting the programming over the Internet. The Western District Court in Pennsylvania found that because U.S. viewers could easily obtain the programming, U.S. Copyright laws were violated. See Twentieth Century Fox Film Corp. et al. v. iCraveTV et al., No. 00-121; National Football League et al. v. TV RadioNow Corp. et al., No. 00-120 (W.D. Pa., Feb. 8, 2000).

broadcasters will be less willing to pay premiums to license high-quality digital programming if, due to content security issues, there is a risk that viewers can access the programming from unlicensed and unauthorized sources. As Commissioner Ness has stated, "[i]f first-run digital product immediately can be captured off air or off cable and replicated . . . or webcast globally -- without payment to the copyright holders, producers are going to be reluctant to release their product."[42/]

The risks to broadcast television stations from unauthorized and instantaneous global retransmission of content over the broadband Internet are equally acute. Advertising revenue is the lifeblood of broadcast television stations, and it is dependent upon a broadcaster's ability to amass and deliver a viewing audience to advertisers. If high-quality digital programming migrates away from broadcast stations due to copyright security concerns, the resulting decline in viewership will result in a decrease in broadcast advertising revenues. That decrease will in turn further diminish the ability of broadcast stations to bid for, and acquire, high-quality digital programming, creating a downward spiral for both programming quality and station revenues. With respect to any remaining digital programming still available for over-the-air broadcast, copyright security concerns also would likely further diminish the already-lowered unit advertising revenues, due to concerns arising from the programming's heightened vulnerability to unauthorized reproduction and retransmission.

If broadcast programmers and distributors cannot use the same digital copyright protection tools utilized by cable channels, such a disparity would produce anomalies that would contravene the interests of consumers. In such a circumstance, content owners would be allowed to protect a repeat of a broadcast on a cable network (such as the syndicated showings of "The X

[42/] Statement of Commissioner Susan Ness before the California Cable Television Association Western Show, Dec. 16, 1999.

Files" or "NYPD Blue" on FX), but not the original broadcasts of such shows on the Fox and ABC networks. Likewise, notwithstanding the higher license fees paid to Major League Baseball for national broadcasts of games, an evening game shown on FX or a local game on a regional cable sports network would receive more protection than a playoff game whose broadcast rights costs more to secure. In short, the result of any regime that precludes broadcast television programming from being able to utilize copyright protection measures available to cable programming, will be to drive high quality programming toward the more secure outlets. Thus, the Commission should not take any action that restrict the ability of digital broadcast stations to employ encryption and other copyright protection measures necessary to meet the heightened risks to content security associated with digital transmissions.[43/]

Not only must new, digital age copyright protection measures be available to all audiovisual programming content, including broadcast programming, but all digital hardware devices must be able to provide the level and type of protection afforded by such measures. As the Notice recognizes, copyright protection in the digital age is "[l]ike a chain that is only as strong as its weakest link."[44/] Passing content through a non-compliant device breaks the "chain" in the copyright protection mechanism. Thus, all digital devices, including source devices,[45/] must be able to identify and respond to CCI and other copyright protection capabilities utilized by content providers. Unless the source device is equipped with the capabilities to respond

[43/] Cf. Notice at ¶ 17. Because conditional access technology may be required to protect content, digital broadcasters should be afforded the flexibility to encrypt their signals. Accordingly, the Commission should not impose or retain any regulation that would preclude any digital broadcast service from being included in a basic programming tier simply because such digital programming service is delivered on a conditional access basis. Importantly, none of this would affect the universality of broadcast television or its availability to the viewer via free over-the-air transmission.

[44/] Notice at ¶ 1.

appropriately to copy management instructions or watermarks, and prohibit the alteration or removal of such instructions or watermarks, the security of any digital content transmitted through that device would be jeopardized.

A number of copyright protection proposals under development today were formulated when the Internet was hardly the phenomenon it is now, and the prospect of ubiquitous, high-speed broadband networks was remote. Thus, some copyright protection "solutions" currently under discussion have not fully grappled with the threat posed to programming from the combination of unsecured source devices and the broadband Internet. Digital programming content that enters an unsecured source device, such as a set-top box or personal computer, could thereafter be diverted from the home to the World Wide Web for further copying, modifying, and distribution. These risks must be addressed in order to ensure adequate copyright protection for audiovisual digital programming content.

Finally, digital copyright protection "solutions" must be robust in order to withstand the inevitable -- and often highly sophisticated -- efforts to decipher and decode protection systems. Content protection functionality can be embedded in the content itself, in the means of transmission, and in the devices that are used to consume, view, manipulate, or process the content. There are advantages and disadvantages to each approach, however. Importantly, content creators should have the broadest possible range of choices when it comes to implementing the best solution for the market.

B. The Commission Should Allow The Market To Complete Its Progress Towards A Solution to Digital Age Copyright Protection Issues

As set forth above, Fox is working with CE and IT companies to reach consensus on a framework for protecting audiovisual digital programming content. There is no reason to believe

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[45/] The source device is the means by which content first enters the home, such as a cable set-top

this process will delay or detract from timely deployment of digital television or the commercial availability of navigation devices. Indeed, an acceptable copyright protection solution will create permanent incentives for the roll-out of digital products and services, and thereby accelerate the process of deploying digital hardware on a widespread basis. In fact, ongoing discussions between the content community, hardware manufacturers and the information technology industry have yielded substantial progress toward a consensus solution on digital copyright protection issues.[46/] While there are still a handful of outstanding issues, the best course for the Commission to pursue at this time would be to allow these industry negotiations to continue in the fashion in which they have been occurring. Indeed, at this stage of the discussions, the prospect of direct Commission involvement beyond encouraging the resolution of ongoing negotiations could inadvertently delay the resolution of these outstanding issues by altering the dynamic of the negotiations.[47/]

Likewise, Fox also believes that the Commission should not take any action that would preclude the use of digital POD modules and host devices to facilitate the implementation of copyright protection technologies. The digital POD module separates proprietary security functions from host devices, in order to enable the retail provisioning of set-top boxes. As noted earlier, there is a threat of a content security breach unless the interface between the POD module and a host or source device, such as a set-top box, is covered by copyright protection measures. Unless that interface is made secure, some high-value digital content (such as pay-

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box, digital TV receiver, DVD player or a computer.

[46/] Cf. Notice at ¶ 13 ("virtually all of the major issues already have been resolved through industry cooperation").

[47/] In any event, the Commission lacks jurisdiction to the extent the relevant issues address copyright protection. The Commission's jurisdiction is limited to ensuring compatibility between cable operator security devices and DTV receivers, and that limited scope does not

per-view movies and premium channels) may be withheld from distribution, due to concerns regarding the adequacy of content protection.

The contention that such a requirement would be inconsistent with the Commission's rules is entirely without basis. Indeed, the entire thrust of the instant proceeding -- to promote retail deployment of DTV hardware without denigrating the need for, and ability of, cable operators to secure their signals -- would be undermined if securing the POD-source device interface is precluded or restricted. Copy protection will only work if the entire network enables it. The efficacy of a cable operator's "front door" conditional access system -- which the Commission seeks to ensure in this proceeding -- will be wholly undermined if content is subject to ready and easy unauthorized reproduction and distribution due to vulnerabilities within the home network. Indeed, such an outcome would defeat both of the objectives of the instant proceeding, since it would undermine signal security and slow the deployment of digital hardware by reducing the availability of high-quality, compelling content in digital form.[48/]

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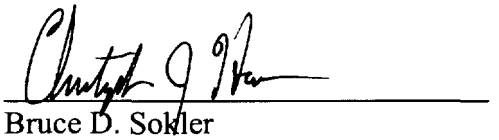
embrace the host of complex copyright protection issues that have been the subject of negotiations between content providers, CE manufacturers, and IT providers.

[48/] The navigation device Report and Order clearly did not restrict the inclusion of copyright protection functionality in POD modules. See Commercial Availability of Navigation Devices, Report and Order, 13 FCC Rcd 14775, 14800 ¶ 63 (1998).

CONCLUSION

In order to facilitate the most expeditious and effective digital copyright protection solutions and spur the deployment of new digital services to consumers, the Commission should refrain from interfering directly with the progress of ongoing industry negotiations.

Respectfully submitted,



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May 24, 2000

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CERTIFICATE OF SERVICE

I, Kathleen Birch, hereby certify that on May 24, 2000, I caused to be served by hand copies of the foregoing "Comments of Fox Entertainment Group, Inc." on the following:

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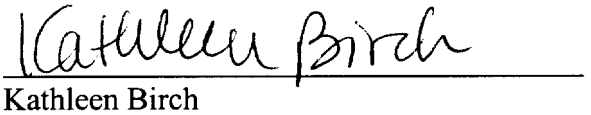

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